

Date: Tue, 15 Feb 94 04:30:19 PST  
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>  
Errors-To: Ham-Ant-Errors@UCSD.Edu  
Reply-To: Ham-Ant@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Ant Digest V94 #33  
To: Ham-Ant

Ham-Ant Digest                    Tue, 15 Feb 94                    Volume 94 : Issue 33

Today's Topics:

Antenna for sale  
Antenna help..  
Antenna size vs frequency?  
Copper Dual-Band Super J-Pole Antenna  
ELNEC & Modelling Wire Antennae  
Help - MacMininec antenna modelling  
Need Wideband RX antenna recommendation (2 msgs)  
Predicting inductor self resonant freq?  
Small Sat Antenna Rcmd Needed  
Wind Load ???

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>  
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: 12 Feb 94 16:24:00 -0500  
From: blkcat!1-109-239-0!Paul.Brzonkala@uunet.uu.net  
Subject: Antenna for sale  
To: ham-ant@ucsd.edu

FOR SALE>

60' Alpha sloper antenna and 75' of coax. \$40.00 takes it.

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Date: Sun, 13 Feb 94 01:25:25 EST  
From: library.ucla.edu!europa.eng.gtefsd.com!howland.reston.ans.net!

vixen.cso.uiuc.edu!sdd.hp.com!nigel.msen.com!ilium!sycom!p-cove!  
wolfman@network.ucsd.edu  
Subject: Antenna help..  
To: ham-ant@ucsd.edu

I want to attempt to build my own 2m vertical.. I have never built one before, so I would like any suggestions ideas, plans, or design ideas that any of you would have. I would like one that has a high gain if it's possible.

I would also like to know if it's possible to use a vertical antenna for making contacts with the Mir space station, the shuttle, or other sats that use fm/packet..

Thanks..

73 de Aaron  
KB8PFZ

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wolfman@p-cove.uucp (Aaron Smith)  
Amateur radio station KB8PFZ

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Date: 14 Feb 1994 18:53:02 GMT  
From: agate!howland.reston.ans.net!noc.near.net!usenet.elf.com!rpi!  
nice2.ne.rpi.edu!brand@network.ucsd.edu  
Subject: Antenna size vs frequency?  
To: ham-ant@ucsd.edu

In article 27926@ncsu.edu, Shane Trent <sdtrent@mte.ncsu.edu> () writes:  
>Hello,  
>  
>I read years ago that the optimum length of an antenna is 1/2 wavelength  
>of the frequency being received, this article was talking about  
>commercial FM. Is this true (no equations needed)?  
>  
>Also, would this apply to a dish antenna? What size microwave (900 MHz)  
>should be used?  
>  
>Thanks for your help,  
>-shane

Shane,  
An antenna's length (physical- electrical) determines what frequency(s) it will resonate at, or in other words, receive/transmit optimally. Most antenna systems - refer back to a

1/4 wavelength. It is common to use a 1/2 wave dipole arrangement - this also provides some gain over a 1/4 wave antenna. You might want to get or look at the radio amateur handbook - this area is quite diverse, in any case, for an antenna to work well it must resonate at the desired frequency and be matched(impedance wise) to the transmission line that feeds/connects to it. In the case of a microwave dish - you are fooled by its appearance. The actual antenna is located in the center of the dish at the focal length of the parabola. The so called dish, has a parabolic curvature - this provides for its usefulness. I won't get into the reasons why - it would take too much here and now. The diameter of the dish provides the "gain". The antenna itself is usually a 1/2 Wave dipole - or 1/4 wave stub.

Hope this helped.

-Peter-

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Date: Thu, 10 Feb 94 10:15:54 CST  
From: elroy.jpl.nasa.gov!usc!yeshua.marcam.com!zip.eecs.umich.edu!umn.edu!uum1!  
kksys.com!edgar!moron!pillock!stevej@ames.arpa  
Subject: Copper Dual-Band Super J-Pole Antenna  
To: ham-ant@ucsd.edu

ydupont@Qc.Bell.CA (Yvan Dupont) writes:

>  
> Did someone build that antenna from KA0NAN that was on the April issue  
> of "73 Amateur Radio Today"? What are your experience with it? Ease of  
> construction and performance???

Greetings From Minneapolis

Long before Marty(KA0NAN) wrote the article on his super J-pole, he had been constructing and selling them at all the local hamfests here in the Twin Cities. There are many hams here that have bought the super-J from Marty and they have been very happy with the performance and construction of the antenna.

The construction is quite solid with only point of weakness being the type of insulating material you choose to use at the matching section. Fiberglass would be preferred. The performance should be close to that of a Ringo Ranger 2.

Steve KA0VYB

\*\*\*Microwavers do it with higher frequency\*\*\*

Date: Mon, 14 Feb 1994 16:02:07 GMT  
From: agate!howland.reston.ans.net!math.ohio-state.edu!cyber2.cyberstore.ca!  
nntp.cs.ubc.ca!utcsri!newsflash.concordia.ca!sifon!clouso.crim.ca!  
hobbit.ireq.hydro.qc.ca!mac2.ireq.hydro.qc.ca!@  
Subject: ELNEC & Modelling Wire Antennae  
To: ham-ant@ucsd.edu

In article <9402080948.aa23234@C0R5.PICA.ARMY.MIL> , Waltk@PICA.ARMY.MIL writes:

> Howdy! I recently acquired ELNEC and would like to share experiences  
> with others on modelling beverages, bobtail curtains and other wire  
> type arrays.

I just tried version 1.16 and it is not as powerfull as I could expect.  
In my case I would like to design a antenna with many segments. ELNEC  
has a limit to 127.

I would like something more powerful with a good editor.

Date: Mon, 14 Feb 1994 14:30:21 GMT  
From: agate!howland.reston.ans.net!torn!nott!cunews!freenet.carleton.ca!  
FreeNet.Carleton.CA!ae517@network.ucsd.edu  
Subject: Help - MacMininec antenna modelling  
To: ham-ant@ucsd.edu

Can anyone offer any advice on how to model an inverted-vee antenna using either MacMininec or Mininec for dos machines?

MacMininec offers several examples for straight dipoles, a trap antenna, as well as a yagi, but I have had little luck in getting it to model an antenna which is not straight.

Yes, I know, I shouldn't be so cheap and buy Elnec :-)

any help would be greatly appreciated.

de VA3RR/AA8LU

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Date: 9 Feb 1994 18:24:52 GMT  
From: foxhound.dsto.gov.au!fang.dsto.gov.au!yoyo.aarnet.edu.au!  
news.adelaide.edu.au!basser.cs.su.oz.au!news.cs.su.oz.au!metro!  
dmssyd.syd.dms.CSIRO.AU!dmspeth.per.dms.@@munnari.oz.au  
Subject: Need Wideband RX antenna recommendation  
To: ham-ant@ucsd.edu

I would like to have an antenna I can mount on my house that can pick up signals from 25 or 50MHz on up to 905 MHz. The antenna would be a receive only proposition (for scanning, etc.).

Any recommendations?

Thanks,  
Chris Magnuson  
chrism@col.hp.com

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Date: 11 Feb 1994 17:13:55 GMT  
From: elroy.jpl.nasa.gov!swrinde!cs.utexas.edu!utah-morgan!hellgate.utah.edu!  
uplherc.upl.com!uplherc!kub@ames.arpa  
Subject: Need Wideband RX antenna recommendation  
To: ham-ant@ucsd.edu

I have found discones do work well for a wide frequency range but tend to have some holes in their coverage. The Radio Shack discone I have worked poorly below about 130 Mhz. I cured this by cutting a stainless steel whip for the VHF aircraft band (118-135 Mhz), about 24 inches, and attaching it under the bolt that holds the disc. It extends above the discone like a ground plane vertical. It helped my reception in that frequency range alot. I've noticed that some of the pricier discones come with this vertical element, probably to enhance lower frequency signals. You could cut the vertical for your band of interest (46-49 Mhz) etc. Worked for me.

Steve - WW7Y

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Opinions are mine since my employer doesn't have any.

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Date: 13 Feb 1994 23:37:19 -0600

From: swrinde!cs.utexas.edu!howland.reston.ans.net!wupost!udel!  
news.sprintlink.net!news.i-link.com!news.i-link.com!not-for-mail@network.ucsd.edu  
Subject: Predicting inductor self resonant freq?  
To: ham-ant@ucsd.edu

Tom Bruhns (tomb@lsid.hp.com) wrote:

: Anyone out there have any reasonably accurate formulas for  
: \_predicting\_ the self resonant frequency of an air-core  
: (self-supporting) inductor, given the geometry? Yes, I  
: can make measurements, but I want to predict what I will  
: get so I can wind the coil I need, then just measure to  
: verify/tweak.

: 73, Tom -- K7ITM

Here is a trick an old-timer taught me: calculate the length of wire in  
the coil (no of turns X Pi X dia). This length will approximate a quarter  
wavelength of the self-resonant frequency of the coil.

Jerry, W0CI                    "Knowledge is good." - Emil Faber

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Date: 11 Feb 94 17:18:44 MDT  
From: agate!howland.reston.ans.net!cs.utexas.edu!utah-morgan!hellgate.utah.edu!  
cc.usu.edu!sly46@ames.arpa  
Subject: Small Sat Antenna Rcmd Needed  
To: ham-ant@ucsd.edu

I also need an antenna recommendation. I am looking to transmit  
in the 450MHz or the 2500MHz range off a small satellite experiment.  
I need a very low profile antenna. Micro-strip phased array antennas  
have been recommended. Does anyone know where I can get info on  
these?

Markus Wilkinson  
Systems Engineer, Gro-Sat  
sly46@cc.usu.edu

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Date: 12 Feb 1994 16:56:40 GMT  
From: dockmaster.phantom.com!lev@uunet.uu.net  
Subject: Wind Load ???  
To: ham-ant@ucsd.edu

Quite simply, the manufacturer calculates that the antenna you intend  
to put up presents a surface area equivalent to 2.25 square feet of flat plate

when pointed into the wind. This number can be used to calculate the forces on the mast for a given wind speed.

Kenneth D Anderson  
(kenman@iastate.edu) wrote:

: The specs on my antenna state the following.  
:  
: Wind load: 2.25 sq. ft.  
:  
: What does this mean? (I know it relates to wind and antennas falling to the  
: ground, but what is it "exactly").  
:  
: Tnx  
:  
: Ken  
  
:  
: --  
: Ken Anderson N0ZEM Kenman@iastate.edu PH: 515.294.8996  
: 126 Soil Tilth Bldg., Iowa State University, Ames, Iowa 50011

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End of Ham-Ant Digest V94 #33  
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